DEPARTMENT OF MATHEMATICS (UG)
CO, PO and PSO Mapping

Blueprint of the question paper	Section	Unit I	Unit II	Unit III	Unit IV	Unit V
	Section A	2	2	2	2	2
	Section B Any FIVE	2	2	1	1	1
	Section C Either OR	2	2	2	2	2
	Section D Any THREE	1	1	1	1	1

Programme Outcome

PO. No.	After completion of the Undergraduate programme the students of St. Mary's College will be able to
PO 1	develop language, numerical, experimental, analytical and computing skills.
PO 2	pursue higher education programmes.
PO 3	excel in the recent trends of the world, enhancing the level of knowledge to emerge as aholistic person.
PO 4	function effectively as an individual in multidisciplinary settings and develop their ethical, social and cultural values to serve the nation.
PO 5	be proficient in the fields of Arts, Science and Management Studies to qualify for the job.
PO 6	develop their communicative skills using a range of technologies which enable them to express their ideas and views effectively.
PO 7	become an environmentally conscious citizen.
PO 8	be an empowered and economically independent woman with efficient leadership qualities in an egalitarian society through liberative education.

Programme Specific Outcome

PSO No.	Upon completion of the B.Sc. Mathematics program, students will be able to:	PO Mapped
PSO-1	understand the foundations of mathematics and perform basic computations in higher mathematics.	PO – 1, 8
PSO-2	understand the power of abstraction and generalization and to carry out investigative and mathematical work with independent judgement.	PO - 3
PSO-3	Communicate mathematical ideas, develop proficiency in the analysis of problems and use mathematical or other appropriate techniques to solve them.	PO –6,8
PSO-4	Apply, create, use and analyze graphical representation of mathematical relationships to model real-world problems.	PO - 5
PSO-5	apply, highly numerate approach to analyze, execute tasks and solve problems in daily life and at work.	PO - 4
PSO-6	appreciate the role of mathematical proof as a means of conveying mathematical knowledge.	PO - 2
PSO-7	carry out objective analysis and prediction of quantitative information with independent judgement.	PO –3,7
PSO-8	develop language communication skills.	PO – 6

Semester – I			
Part III Core I	**Classical Algebra**		
Course Code :21UMAC11	**Hrs/week: 4**	**Hrs/Semester: 60**	**Credits: 3**

Unit I

Fundamental theorem of algebra - In an equation with real coefficients, imaginary roots occur in pairs - In an equation with rational coefficients, irrational roots occur in pairs -Relations between the roots and coefficients of equations. Symmetric function of the roots

(Chapter 6, Sec 1 – 12, pages 282-307)

Unit II

Sum of the powers of the roots of an equation - Newton's theorem on the sum of the powers of the roots -Transformation of equation - Reciprocal equation - Standard form of reciprocal equations.

(Chapter 6, Sec 13-16, pages 308-327)

Unit III

To increase or decrease the roots of a given equation by a given quantity – Form of the quotient and remainder when a polynomial is divided by a binomial - Removal of terms – To form an equation whose roots are any power of the roots of a given equation - Transformation in General.

(Chapter 6, Sec 17-23, pages 327-351)

Unit IV

Descarte's rule of signs - Rolle's theorem -Multiple roots -Strum's Theorem.

(Chapter 6, Sec 24 – 26, pages 351-362)

Unit V

Horner's method- General solution of the cubic equations - Cardon's method – Trigonometrical method – Solution of biquadratic equation - Ferrari method.

(Chapter 6, Sec 30,34, pages:376-382,390-398)

Text Book

1. Manicavachagom Pillay T.K., Natarajan T., Ganapathy K.S., *Algebra,* Volume-I, Ananda Book Depot, Chennai, Reprint 2017.

Books for Reference

1. Arumugam S. and A. Thangapandi Isaac, *Algebra,* New Gamma Publishing House, August 2006.

2. Kandasamy P. and Thilagavathi K., *Mathematics for B.Sc*., 2004, Volume I and Volume IV, S. Chand & Co., New Delhi.

SEMESTER - 1			
Part – 1 nghJj;jkpo; jhs; - 1 ,f;fhy ,yf;fpak; (nra;As;> ,yf;fzk;> ,yf;fpa tuyhW> ciueil> rpWfij)			
Course Code: 21ULTA11	**Hrs/Week:6**	**Hrs/Semester: 90**	**Credits: 3**

Course outcome:

CO.NO	**,g;ghlj;jpl;lk; khztpaUf;F**	**mwpTrhh; kjpg;gPL**
CO-1	ngz; rhh;e;j tpLjiy> nghJikr; rpe;jid czh;itAk; tsh;f;fpwJ	tsh;r;rp
CO-2	,aw;ifiag; NgZjw;Fk; tho;tpd; tsh;r;rp epiyia Nkk;gLj;jpf; nfhs;Sjw;Fk; cjTfpwJ.	eilKiwg;gLj;Jjy;
CO-3	rka ey;ypzf;fk;> xw;Wik czh;T> ,iw ek;gpf;if ,tw;iw cUthf;FfpwJ.	cUthf;fk;
CO-4	nkhopiag; gpioapd;wp NgrTk; vOjTk; cjTfpwJ.	Ghpjy; jpwd; Nkk;ghL
CO-5	jdpkdpj tho;f;ifr; rpf;fy;fs;> rKjhag; gpur;ridfs; vjph;nfhs;Sk; jpwid vLj;Jiuf;fpwJ.	eilKiwg;gLj;Jjy;
CO-6	Nghl;bj; Njh;TfSf;Fg; gad;gLk; tifapy; gilg;ghf;fj; jpwid tsh;f;f cjTfpwJ.	gilg;ghw;wy; jpwd; Nkk;ghL

Tamil-21ULTA11

Course Outcomes	**Programme Outcomes (PO)**								**Programme Specific Outcomes (PSO)**							
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**
CO-1	3	2	3	3	3	2	2	3	3	2	3	3	3	3	3	2
CO-2	3	3	3	3	3	2	2	3	3	3	3	3	3	3	3	3
CO-3	2	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3
CO-4	3	2	3	3	3	3	2	3	3	3	2	2	2	3	2	2
CO-5	3	3	3	3	2	3	3	3	2	3	3	3	3	3	3	3
CO-6	3	2	2	3	3	2	2	3	2	3	3	3	3	3	3	3
Ave.	2.8	2.5	2.6	3	2.8	2.5	2.3	3	2.6	2.8	2.8	2.8	2.8	3	2.8	2.6

SEMESTER – I			
Course Title: PART – I French Paper – I Introductory French Course			
Course Code : 21ULFA11	**Hrs/week : 6**	**Hrs/ Sem : 90**	**Credits : 3**

Course outcome:

CO	At the end of this course, the students will be able to	CL
1.	make the initial conversation in French	Un, Re
2.	understand the basic sentence structures and make sentences of their own	Un, Ap
3.	analyse and evaluate intercultural factors	An
4.	understand grammar and apply the acquired grammatical knowledge in solving grammar exercises	Un, Ap
5.	differentiate the French culture	An
6.	understand the French and francophonic lifestyle	Un, Re

Introductory French Course - 21ULFA11

	PO									PSO								
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	Avg	PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	PSO-6	PSO-7	PSO-8	Avg
CO-1	3	3	3	3	3	3	2	3	**2.8**	3	3	3	3	3	3	3	3	**3**
CO-2	3	3	3	3	3	3	2	3	**2.8**	3	3	3	3	3	3	3	3	**3**
CO-3	3	3	2	3	3	3	3	3	**2.8**	3	3	3	3	3	3	3	3	**3**
CO-4	3	3	3	3	3	3	2	3	**2.8**	3	3	2	2	2	3	3	3	**2.6**
CO-5	3	3	3	3	3	3	3	3	**3**	2	3	3	3	3	3	3	3	**2.8**
CO-6	3	3	3	3	3	3	2	3	**2.8**	2	3	3	3	3	3	3	3	**2.8**
Average	**3**	**3**	**2.8**	**3**	**3**	**3**	**2.3**	**3**		**2.6**	**3**	**2.8**	**2.8**	**2.8**	**3**	**3**	**3**	
PO Mean									**2.8**	PSO Mean								**2.9**
Strength of PO Correlation				Strong						Strength of PSO Correlation				Strong				

SEMESTER-I			
Part II General English	**Poetry, Prose, Extensive Reading and Communicative English-I**		
Course Code: 21UGEN11	**Hrs/Week: 6**	**Hrs/Semester:90**	**Credits:3**

Course Outcome:

CO. No.	Upon completion of this course, students will be able to	PSO Addressed	Cognitive Level
CO- 1	understand and extend their listening and writing skills.	1	Un
CO- 2	apply and incorporate basic grammar and mechanics in writing.	3	Ap
CO- 3	understand literary texts in its socio-cultural contexts	2, 4	Un, Ap
CO- 4	communicate in English with confidence for employability.	3	Ap
CO- 5	appreciate and imbibe ethical and moral values through the study of the literary pieces.	5	Ap, Ev
CO- 6	construct simple sentences and short paragraphs in response to reading and writing.	8	Cr

21UGEN11 Poetry, Prose, Extensive Reading, and Communicative English – I

	PO									PSO								
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	Avg	PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	PSO-6	PSO-7	PSO-8	Avg
CO-1	3	2	3	2	3	2	3	2	**2.5**	2	3	2	3	2	3	2	3	**2.5**
CO-2	2	3	2	3	2	3	2	3	**2.5**	3	2	3	2	3	2	3	2	**2.5**
CO-3	3	2	3	2	3	2	3	2	**2.5**	2	3	2	3	2	3	2	3	**2.5**
CO-4	2	3	2	3	2	3	2	3	**2.6**	3	2	3	2	3	2	3	2	**2.6**
CO-5	3	2	3	2	3	2	3	2	**2.5**	2	3	2	3	2	3	2	3	**2.5**
CO-6	2	3	2	3	2	3	2	3	**2.6**	3	2	3	2	3	2	3	2	**2.6**
Average	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.6**	**2.5**		**2.5**	**2.5**	**2.5**	**2.5**	**2.6**	**2.5**	**2.6**	**2.5**	
PO Mean									**2.6**	PSO Mean								**3.0**
Strength of PO Correlation				Strong						Strength of PSO Correlation				Strong				

SEMESTER – I			
Part III Core I	**Classical Algebra**		
Course Code:21UMAC11	**Hrs / Week: 4**	**Hrs / Semester: 60**	**Credits: 3**

Course outcomes:

CO.No.	Upon completion of this course, students will be able to	PSOs addressed	CL
CO-1	solve polynomial equations and simultaneous linear equations.	3	An
CO-2	form the equations from the given roots and identify and solve the reciprocal equations	4	Cr
CO-3	Transform the equations by increasing, decreasing and multiplying the roots of the equations.	3	Un
CO-4	Locate real and imaginary roots of the equations	4	Un
CO-5	Find the approximate values of the irrational roots of the equations.	3	Cr
CO-6	Determine the roots of the equations by using various methods like cardon's method, Ferrari's method.	3	Cr

Classical Algebra - 21UMAC11

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	3	2	3	2	**2.8**	3	3	3	3	3	3	3	1	**2.8**
CO-2	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	2	**2.6**
CO-3	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	3	2	**2.8**
CO-4	3	3	3	2	3	3	1	2	**2.5**	3	3	3	3	3	2	2	3	**2.8**
CO-5	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	3	2	2	**2.8**
CO-6	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	3	3	2	**2.9**
Average	**3**	**3**	**3**	**2.8**	**3**	**2.2**	**2**	**2**		**3**	**3**	**3**	**3**	**3**	**2.5**	**2.5**	**2**	
PO Mean									**2.6**	PSO Mean								**2.8**
Strength of PO Correlation				Strong						Strength of PSO Correlation					Strong			

SEMESTER – I			
Core II	**Calculus**		
Course Code :21UMAC12	**Hrs / Week: 4**	**Hrs / Semester: 60**	**Credits: 3**

Course Outcome:

CO.No.	Upon completion of this course, students will be able to	PSOs addressed	CL
CO-1	state the concept of curvature of a plane curve.	4	Re
CO-2	calculate the curvature of various curves in plane and space	4	Ev
CO-3	apply the fundamental concepts of Calculus to variety of realworld problems.	3	Ap
CO-4	evaluate triple integrals and use them to find volumes in rectangular, cylindrical and spherical coordinates.	3	Ev
CO-5	compute definite and indefinite integrals of algebraic and trigonometric functions using formulae and substitution	3	Cr
CO-6	use Beta and Gamma function to solve different type of integrals and to understand Gamma function as a generalization of factorial function.	6	Ev

Calculus-21UMAC12

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	3	2	**2.8**
CO-2	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	2	3	2	**2.6**
CO-3	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	2	3	2	**2.6**
CO-4	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	2	3	2	**2.8**
CO-5	3	3	3	3	3	2	2	2	**2.8**	3	3	3	3	3	2	3	2	**2.8**
CO-6	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	3	2	**2.8**
Average	**3**	**3**	**3**	**3**	**3**	**2.8**	**2**	**2**		**3**	**3**	**3**	**3**	**3**	**2.3**	**3**	**2**	
PO Mean									**2.8**	PSO Mean								**2.7**
Strength of PO Correlation					Strong					Strength of PSO Correlation					Strong			

SEMESTER I			
ALLIED PHYSICS – PAPER I - I B.Sc., Mathematics			
Course Code : 21UPHA11	**Hrs/Week: 4**	**Hrs/ Semester: 60**	**Credits :3**

Course Outcome :

CO. No.	Upon completion of this course, students will be able to	PSO addressed	CL
CO-1	recall the fundamentals of elasticity, stress and (K1)	1	Re
CO-2	solve problems related to uniform and non-uniform bending of beams (K3)	1	Ap
CO-3	estimate the thermal conductivity of a bad conductor (K2)	1,6	Un
CO-4	calculate the specific heat capacity of a liquid (K3)	1,6	Ap
CO-5	evaluate the thickness of a thin wire by forming interference fringes (K5)	1,6	Ev
CO-6	outline dispersive power and resolving power of a grating (K4)	1,6	An

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SEMESTER - II			
Part -1 nghJj;jkpo; - jhs; 2 rka ,yf;fpaq;fSk; ePjp ,yf;fpaq;fSk; (nra;As;> ,yf;fzk>; ,yf;fpatuyhW>ciueil>tho;f;iftuyhW)			
Course Code: 21ULTA21	**Hrs/Week:6**	**Hrs/ Semester: 90**	**Credits :3**

Course Outcome:

CO.No.	,g;ghlj;jpl;lk; khztpaUf;F	mwpTrhh; kjpg;gPL
CO-1	,iwMw;wiyczh;e;Jnfhs;scjTfpwJ	kjpg;gPL
CO-2	ey;yez;gh;fisAk; ey;ykdpjh;fisak; ,dk; fz;Lnfhs;sTk;>md;G> ,uf;fk;>ew;nrhy;>ew;nray; Nghd;wew;gz;GfNshLthoTk; top tFf;fpwJ.	eilKiwg;gLj;Jjy;
CO-3	kdpj Nea gz;GfNshLtho;e;jrhd;Nwhhpd; mDgtq;fisg; ngw;Wf;nfhs;scjTfpwJ	eilKiwg;gLj;Jjy;
CO-4	jdpkdpjtho;f;ifr; rpf;fy;fisAk; gpur;ridfisAk; vjph;nfhs;Sk; Mw;wiycUthf;FfpwJ.	eilKiwg;gLj;Jjy;>jpwd; Nkk;ghL
CO-5	,iwtd; Kd; midtUk; rkk; vd;wrpe;jidiacUthf;FfpwJ.	kjpg;gPL
CO-6	Nghl;bj;Njh;TfSf;Fg; gad;gLk; tifapy; gilg;ghf;fj; jpwidtsh;f;fcjTfpwJ.	gilg;ghw;wy;

Tamil - 21ULTA21

	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	PSO-6	PSO-7	PSO-8
CO-1	3	2	3	3	3	2	2	3	3	2	3	3	3	3	3	2
CO-2	3	3	3	3	3	2	2	3	3	3	2	3	3	3	3	3
CO-3	2	3	2	3	3	3	3	3	3	3	3	3	3	2	3	3
CO-4	3	3	3	3	3	3	3	3	3	3	2	2	2	3	2	2
CO-5	3	3	3	3	2	3	3	2	2	3	3	3	3	2	3	3
CO-6	3	2	2	3	3	2	2	3	2	3	3	3	3	3	3	3
Ave.	2.8	2.6	2.6	3	2.8	2.5	2.5	2.8	2.6	2.8	2.6	2.8	2.8	2.6	2.8	2.6

SEMESTER – II			
Course Title: PART – I French Paper – II Intermediate French Course			
Course Code :21ULFA21	**Hrs/week: 6**	**Hrs/ Sem: 90**	**Credits: 3**

Course Outcomes:

CO	At the end of this course, the students will be able to	CL
1.	listen, understand and make basic conversation in French	Un, Ap
2.	demonstrate proficiency in vocabulary	Re, Ap
3.	be involved in simulation and role-play	Re, Ap
4.	analyse her culture and compare it with French Culture	Re, Un
5.	create passages on her own	Ap, Cr
6.	get a gist of the French literature	Un

Intermediate French course- 21ULFA21

	PO									PSO								
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	Avg	PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	PSO-6	PSO-7	PSO-8	Avg
CO-1	3	3	3	3	3	3	3	3	**3**	3	3	3	3	3	3	3	3	**3**
CO-2	3	3	3	3	3	3	2	3	**2.8**	3	3	3	3	3	3	3	3	**3**
CO-3	3	3	3	3	3	3	2	3	**2.8**	3	3	3	2	3	3	3	3	**2.8**
CO-4	2	3	3	3	3	3	3	3	**2.8**	3	3	3	3	3	3	3	3	**3**
CO-5	3	3	3	3	3	3	2	3	**3**	3	3	3	3	3	3	3	3	**3**
CO-6	3	3	3	3	3	3	2	3	**2.8**	3	3	3	3	3	3	2	3	**2.8**
Average	**2.8**	**3**	**3**	**3**	**3**	**3**	**2.3**	**3**		**3**	**3**	**3**	**2.8**	**3**	**3**	**2.8**	**3**	
PO Mean									**2.9**	PSO Mean								**2.9**
Strength of PO Correlation				Strong						Strength of PSO Correlation						Strong		

SEMESTER-II			
Part II General English	**Poetry, Prose, Extensive Reading and Communicative English –II**		
Course Code 21UGEN21	**Hrs/Week: 6**	**Hrs/Semester:90**	**Credits:3**

Course Outcome:

CO.No.	Upon completion of this course, students will be able to	PSO Addressed	Cognitive Level
CO-1	enhance their vocabulary through the texts.	1	Un
CO- 2	demonstrate effective communication skills.	3	Un, Ap
CO- 3	comprehend passages and interpret on their own.	1,2	Un, Ap
CO- 4	construct paragraphs and essays, make notes and sum up passages.	8	An
CO- 5	analyse literary pieces and inculcate ethical values.	5	An
CO- 6	evaluate how language and literature are closely related to life.	5,6	Cr

21UGEN21-Poetry, Prose, Extensive Reading, and Communicative English - II

	PO									PSO								
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	Avg	PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	PSO-6	PSO-7	PSO-8	Avg
CO-1	3	2	3	2	3	3	2	2	**2.5**	3	2	3	3	2	2	3	2	**2.4**
CO-2	2	3	2	3	2	2	3	3	**2.5**	2	3	2	2	3	3	2	3	**2.5**
CO-3	3	2	2	3	3	2	2	3	**2.5**	3	2	3	2	3	2	3	2	**2.5**
CO-4	3	3	3	2	2	3	2	3	**2.6**	2	3	3	2	3	3	2	2	**2.6**
CO-5	2	3	2	3	3	2	3	2	**2.5**	3	3	2	3	3	2	2	3	**2.5**
CO-6	3	2	3	3	2	3	3	2	**2.6**	2	3	3	2	2	3	3	2	**2.6**
Average	**2.6**	**2.5**	**2.6**	**2.5**	**2.6**	**2.5**	**2.5**	**2.5**		**2.6**	**2.5**	**2.6**	**2.5**	**2.6**	**2.5**	**2.6**	**2.5**	
PO Mean									**2.6**	PSO Mean								**2.6**
Strength of PO Correlation				Strong						Strength of PSO Correlation				Strong				

SEMESTER – II			
Core III	**Analytical Geometry of Three Dimensions**		
Course Code :21UMAC21	**Hrs / Week: 4**	**Hrs / Semester: 60**	**Credits: 3**

Course Outcome:

CO.No.	Upon completion of this course, students will be able to	PSOs addressed	CL
CO-1	understand the fundamental aspects of three-dimensional geometry.	1	Un
CO-2	represent simple three-dimensional figures using two-dimensional drawings.	3	Un
CO-3	demonstrate basic mathematical understanding and computational skills in three dimensions.	8	Un
CO-4	apply algebraic methods to the study of curves and surfaces that lie in three dimensions.	4	Un
CO-5	apply geometric properties and relationships to solve problems in three dimensions.	4	Un
CO-6	develop logical thinking, geometric thinking and three-dimensional spatial ability.	6	An

Analytical Geometry of Three Dimensions-21UMAC21

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-2	3	3	3	2	3	3	2	2	**2.8**	3	3	3	3	3	2	2	2	**2.6**
CO-3	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	2	2	2	**2.6**
CO-4	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	2	2	3	**2.8**
CO-5	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	3	**2.8**
CO-6	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
Average	**3**	**3**	**3**	**3**	**3**	**2.8**	**2**	**2**		**3**	**3**	**3**	**3**	**3**	**2.3**	**2**	**2.3**	
PO Mean									**2.8**	PSO Mean								**2.7**
Strength of PO Correlation					Strong					Strength of PSO Correlation						Strong		

SEMESTER – II			
Part III Core IV	**Differential Equations**		
Course Code :21UMAC22	**Hrs / Week: 4**	**Hrs / Semester: 60**	**Credits: 3**

Course Outcome:

CO.No.	Upon completion of this course, students will be able to	PSOs addressed	CL
CO-1	verify whether a given function is a solution of a given ordinary differential equation (as well as verifying initial conditions when applicable).	8	An
CO-2	classify ordinary differential equations into linear and nonlinear equations.	4	Un
CO-3	solve first order linear differential equations.	3	An
CO-4	find the general solution of second order linear homogeneous equations with constant coefficients.	3	Cr
CO-5	use the Laplace transform to compute solutions of second order, linear equations with constant coefficients	3	An
CO-6	identify essential characteristics of ordinary and partial differential equations.	3	Un

Differential equations - 21UMAC22

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO -4**	**PO -5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO -1**	**PSO -2**	**PSO-3**	**PSO -4**	**PSO -5**	**PSO -6**	**PSO -7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-2	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	2	2	2	**2.6**
CO-3	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	2	2	2	**2.6**
CO-4	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	2	2	2	**2.6**
CO-5	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	2	**2.6**
CO-6	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
Average	**3**	**3**	**3**	**3**	**3**	**2.8**	**2**	**2**		**3**	**3**	**3**	**3**	**3**	**2.3**	**2**	**2**	
PO Mean									**2.8**	PSO Mean								**2.7**
Strength of PO Correlation				Strong						Strength of PSO Correlation					Strong			

SEMESTER – III			
Part-I nghJj;jkpo; - jhs; 3fhg;gpa ,yf;fpaq;fSk; rpw;wpyf;fpaq;fSk; (nra;As;> ,yf;fzk;>,yf;fpatuyhW>ciueil>Gjpdk;>)			
Course Code: 21ULTA31	**Hrs / Week:6**	**Hrs / Semester: 90**	**Credits: 4**

Course Outcome:

CO.No.	,g;ghlj;jpl;lk; khztpaUf;F	mwpTrhh; kjpg;gPL
CO-1	ngz;fspd; rl;lq;fs; chpikfs;>Ntiytha;g;Ggw;wpatpguq;fismwp;e;Jnfhs;scjTfpwJ.	eilKiwg;gLj;jy;
CO-2	murpay; #o;r;rp> ,dk;>rhjpFwpj;jghFghL ,tw;wpypUe;JtpLjiyngWk; toptiffisf; fw;Wf;nfhLf;fpwJ.	eilKiwg;gLj;jy;
CO-3	,yf;fpamwptpidtsh;f;f>fhg;gpar; Ritczh;e;JRitf;ftha;g;gspf;fpwJ.	eilKiwg;gLj;jy;
CO-4	jdpkdpjtho;f;ifr; rpf;fy;fisvjpHnfhs;Sk; epiyiacUthf;FfpwJ	eilKiwg;gLj;jy;
CO-5	,g;gFjpapy; thOk; mbj;jl;Lkf;fspd; tho;Tepiyiamwpe;Jnfhs;scjTfpwJ. ngz;fs; ePjpf;Fg; NghuhLk; czHittsh;f;fpwJ.	eilKiwg;gLj;jy;>jpwd; Nkk;ghL
CO-6	Nghl;bj; NjHTfSf;Fg; gad;gLk; tifapy; gilg;ghf;fj; jpwidtsHf;fcjTfpwJ.	gilg;ghw;wy;>jpwd; Nkk;ghL

Tamil - 21ULTA31

	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	PSO-6	PSO-7	PSO-8
CO-1	3	2	3	3	3	2	2	3	3	2	3	3	3	3	3	2
CO-2	3	3	3	3	3	2	2	3	2	3	2	3	3	3	3	3
CO-3	2	3	2	3	3	3	3	3	3	3	3	3	3	2	3	3
CO-4	3	3	3	3	3	3	3	3	3	3	2	2	2	3	2	2
CO-5	2	3	3	3	2	3	3	2	2	3	3	3	3	2	3	3
CO-6	3	3	2	3	3	2	2	3	2	3	3	3	3	3	3	3
Ave.	2.6	2.8	2.6	3	2.8	2.5	2.5	2.8	2.5	2.8	2.6	2.8	2.8	2.6	2.8	2.6

SEMESTER – III			
Course Title : PART – I French Paper – III Advanced French Language			
Course Code : 21ULFA31	**Hrs/week : 6**	**Hrs/ Sem : 90**	**Credits : 4**

Course Outcomes:

CO	At the end of this course, the students will be able to	CL
1.	analyse and Interpret French realities	An, Ap
2.	understand and analyse the various components of French life	Un, An
3.	evaluate French civilisation, appreciate the differences between eastern and western civilisation	Ev
4.	understand grammar and apply the acquired grammatical knowledge to do the grammar exercises	Un, Ap
5.	create passages on her own civilisation in the target language	Un, Cr
6.	comprehend French literature	Un

Advanced French Language-21ULFA31

	PO									**PSO**								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	3	3	3	3	**3**	3	3	3	3	3	3	3	3	**3**
CO-2	3	3	3	3	3	3	3	3	**3**	3	3	3	3	3	3	3	3	**3**
CO-3	3	3	2	3	3	3	3	3	**2.8**	2	3	3	3	3	3	3	3	**2.8**
CO-4	2	3	3	3	3	3	2	3	**2.7**	3	3	3	2	3	3	2	3	**2.7**
CO-5	3	3	3	3	3	3	2	3	**2.8**	3	3	3	3	3	3	3	3	**3**
CO-6	3	3	3	3	3	3	3	3	**3**	2	3	3	3	3	3	3	3	**2.8**
Average	**2.8**	**3**	**2.8**	**3**	**3**	**3**	**2.7**	**3**		**2.7**	**3**	**3**	**2.8**	**3**	**3**	**2.8**	**3**	
PO Mean									**2.8**	PSO Mean								**2.9**
Strength of PO Correlation				Strong						Strength of PSO Correlation				Strong				

SEMESTER – III			
Part II English Poetry, Prose, Extensive Reading and Communicative English - III			
Course Code: 21UGEN31	**Hrs/ Week: 6**	**Hrs/ Semester: 90**	**Credits: 4**

Course Outcome:

CO.No.	**Upon completion of this course, students will be able to**	**PSO Addressed**	**CL**
CO-1	understand the language and literary components of texts	1	Un
CO-2	develop interest and appreciate literary texts	2	Un, Ev
CO-3	comprehend aspects of grammar and its application	6	Un
CO-4	evaluate perspectives and human values for life	4, 5	Ev
CO-5	adopt appropriate technique to enhance communication and writing	3, 7	Ap, Cr
CO-6	enrich vocabulary and develop skills of formal writing and communication	7, 8	Ap, Cr

21UGEN31-Poetry, Prose, Extensive Reading

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	2	3	3	3	3	2	**2.7**	3	2	3	3	3	3	2	3	**2.7**
CO-2	3	3	2	3	2	2	3	3	**2.6**	2	3	3	3	3	2	3	2	**2.6**
CO-3	2	3	3	3	2	3	3	2	**2.6**	3	3	3	2	3	2	3	3	**2.7**
CO-4	3	3	2	3	3	3	2	3	**2.7**	2	3	2	3	3	2	3	2	**2.5**
CO-5	3	2	3	3	3	3	2	3	**2.7**	3	3	2	3	3	2	3	3	**2.7**
CO-6	3	2	3	3	2	3	3	2	**2.6**	2	3	3	3	2	3	3	2	**2.6**
Average	**2.8**	**2.6**	**2.5**	**3**	**2.5**	**2.8**	**2.6**	**2.5**		**2.5**	**2.8**	**2.6**	**2.8**	**2.8**	**2.3**	**2.8**	**2.5**	
PO Mean									**2.6**	PSO Mean								**2.6**
Strength of PO Correlation				Strong						Strength of PSO Correlation					Strong			

Semester – III			
Part III Core V	**Sequences and Series, Trigonometry**		
Course Code : 21UMAC31	**Hrs/week: 6**	**Hrs/Semester: 90**	**Credits: 5**

Course Outcome:

CO.No.	Upon completion of this course, students will be able to	PSO s addressed	CL
CO-1	know the important inequalities necessary to compare the real numbers.	3	Ev
CO-2	explain the difference between a sequence and a series in the mathematical context.	2	Un
CO-3	Identify boundedness, monotonic, limit points etc. of a sequence.	8	Un
CO-4	apply various tests to verify the convergence or divergence of a given sequence and also the series.	4	Ap
CO-5	gain a basic knowledge about analysis which helps them in higher studies.	3	Re
CO-6	reconstruct the formulae which are accustomed in elementary levels	4	Ev

Sequences and Series, Trigonometry-21UMAC31

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	3	2	**2.9**
CO-2	3	3	3	3	3	2	3	2	**2.8**	3	3	3	3	3	2	2	2	**2.6**
CO-3	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	2	2	2	**2.6**
CO-4	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	2	**2.6**
CO-5	3	3	3	3	3	2	3	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-6	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	3	3	2	**2.9**
Average	**3**	**3**	**3**	**3**	**3**	**2.3**	**2.3**	**2**		**3**	**3**	**3**	**3**	**3**	**2.5**	**2.3**	**2**	
PO Mean									**2.7**	PSO Mean								**2.7**
Strength of PO Correlation				Strong						Strength of PSO Correlation					Strong			

Semester – III			
Part III	**Allied Statistics I**		
CourseCode :21UMMA31	**Hrs/week : 6**	**Hrs/Sem : 90**	**Credits : 4**

Course Outcome:

CO.No.	Upon completion of this course, students will be able to	PSOs addressed	CL
CO-1	understand the difference between the central moments and general moments	1	Un
CO-2	apply concepts and theorems in solving problems	4	Ap
CO-3	find correlation between two variables	3	Ap
CO-4	evaluate particular regression lines	3 and 7	Ap
CO-5	Fit Binomial, Poisson and Normal distribution.	4	Ap
CO-6	compare moment generating function and cumulant generating function	2 and 7	Ev

21UMMA31-Statistics I

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	2	3	3	2	**2.8**	3	3	3	3	3	2	2	2	**2.6**
CO-2	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	1	**2.5**
CO-3	3	3	3	3	3	2	2	1	**2.5**	3	3	3	3	3	2	2	1	**2.5**
CO-4	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	3	**2.8**
CO-5	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	3	**2.8**
CO-6	3	3	3	3	3	2	3	2	**2.8**	3	3	3	3	3	3	3	3	**3.0**
Average	**3**	**3**	**3**	**3**	**3**	**2.2**	**2**	**2**		**3**	**3**	**3**	**3**	**3**	**2.2**	**2.2**	**2.2**	
PO Mean									**2.7**	PSO Mean								**2.7**
Strength of PO Correlation				Strong						Strength of PSO Correlation					Strong			

SEMESTER – IV			
Part-1 nghJj;jkpo; - jhs; 4rq;f ,yf;fpak; (nra;As;> ,yf;fzk;>,yf;fpatuyhW>ciueil>ehlfk;)			
Course Code: 21ULTA41	**Hrs / Week:6**	**Hrs / Semester: 90**	**Credits: 4**

Course Outcome:

CO.No.	,g;ghlj;jpl;lk; khztpaUf;F	mwpTrhh; kjpg;gPL
CO-1	mDgtmwpittsh;f;fpwJ.	eilKiwg;gLj;jy;
CO-2	goe;jkpoh; tho;tpay; Kiwfisfw;WgadilacjTfpwJ.	eilKiwg;gLj;jy;
CO-3	kdpjNeak;> ,iwek;gpf;if ,tw;iwcUthf;FfpwJ.	cUthf;fk;
CO-4	jdpkdpjtho;f;ifr; rpf;fy;fisvjpHnfhs;Sk; epiyiacUthf;FfpwJ	eilKiwg;gLj;jy;> cUthf;fk;
CO-5	rKjhagpur;rpidfisvjpHnfhs;Sk; jpwk; fpilf;fpwJ.	eilKiwg;gLj;jy;> jpwd; Nkk;ghL
CO-6	Nghl;bj; NjHTfSf;Fg; gad;gLk; tifapy; gilg;ghf;fj; jpwidtsHf;fcjTfpwJ.	gilg;ghw;wy;> jpwd; Nkk;ghL

Tamil - 21ULTA41

Course Outcomes	Programme Outcomes (PO)								Programme Specific Outcomes (PSO)							
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	PSO-6	PSO-7	PSO-8
CO-1	3	2	3	3	3	2	2	3	3	2	3	3	3	2	3	2
CO-2	3	3	3	2	3	2	3	3	3	3	3	2	3	3	3	3
CO-3	2	3	2	3	3	3	3	2	3	3	3	3	3	3	3	3
CO-4	2	2	3	3	3	3	3	3	3	3	2	2	2	3	2	2
CO-5	3	3	3	2	2	3	3	3	2	3	3	3	3	2	3	3
CO-6	3	2	2	3	3	2	3	3	2	3	3	2	3	3	3	3
Ave.	2.6	2.5	2.6	2.6	2.8	2.5	2.8	2.8	2.6	2.8	2.8	2.5	2.8	2.6	2.8	2.6

SEMESTER – IV			
Course Title: PART – I French Paper – IV French Course and Literature			
Course Code: 21ULFA41	**Hrs/week: 6**	**Hrs/ Sem: 90**	**Credits: 4**

Course Outcomes:

CO	At the end of this course, the students will be able to	CL
CO-1	reflect upon the author's ideas and transform their own personality	Un
CO-2	explore a literary text, with the perspective of analyzing the content and manner of writing	Un, An
CO-3	create critical appreciations	Ev
CO-4	evaluate the literary piece in comparison with any other of another language	An, Ap
CO-5	identify grammar rules in literary text and apply the grammatical knowledge to do grammar exercises	Re, Un, Ap
CO-6	discover, interrogate and reflect on the humanistic value	An

French Course and Literature- 21ULFA41

Course outcome	PO									PSO								
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	Avg	PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	PSO-6	PSO-7	PSO-8	Avg
CO-1	3	2	3	3	3	3	2	3	**2.7**	2	2	3	3	3	3	3	3	**2.7**
CO-2	3	3	3	3	3	3	2	3	**2.8**	3	3	3	3	3	3	3	3	**3**
CO-3	3	3	3	3	3	3	3	3	**3**	3	3	3	3	3	3	3	3	**3**
CO-4	3	3	3	3	3	3	2	3	**2.8**	3	3	3	3	3	3	3	3	**3**
CO-5	3	3	3	3	3	3	2	3	**2.8**	3	3	3	3	3	3	3	3	**3**
CO-6	3	3	3	3	3	3	3	3	**3**	3	3	3	3	3	3	3	3	**3**
Average	**3**	**2.8**	**3**	**3**	**3**	**3**	**2.3**	**3**		**2.8**	**2.8**	**3**	**3**	**3**	**3**	**3**	**3**	
PO Mean									**2.8**	PSO Mean								**3**
Strength of PO Correlation				Strong						Strength of PSO Correlation				Strong				

SEMESTER – IV			
Part II English Poetry, Prose, Extensive Reading and Communicative English – IV			
Course Code 21UGEN41	**Hrs/ Week: 6**	**Hrs/ Semester: 90**	**Credits: 4**

Course Outcome:

CO.No.	**Upon completion of this course, students will be able to**	**PSO Addressed**	**CL**
CO-1	comprehend better the language and literary components of texts	1	Un
CO-2	gain deeper insight into literary experience and expressions of writers	2	Un
CO-3	be competent in conversational and functional English	3	Ap
CO-4	employ nuances of verbal and non-verbal techniques in communication	5, 6	Ap
CO-5	adopt right perspectives of human values for life	4, 5	Ap
CO-6	face interviews and competitive exams with confidence	7	Ap

21UGEN41-Poetry, Prose, Extensive Reading

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	2	3	3	3	3	2	**2.7**	3	2	3	3	3	3	2	3	**2.7**
CO-2	3	3	2	3	2	2	3	3	**2.6**	3	3	3	3	3	3	3	2	**2.8**
CO-3	2	3	3	3	3	3	3	2	**2.7**	3	3	3	2	3	2	3	3	**2.7**
CO-4	3	3	2	3	3	3	3	3	**2.8**	2	3	2	3	3	3	3	3	**2.7**
CO-5	3	3	3	3	3	3	2	3	**2.8**	3	3	2	3	3	2	3	3	**2.7**
CO-6	3	3	3	3	2	3	3	2	**2.7**	2	3	3	3	3	3	3	2	**2.7**
Average	**2.8**	**3**	**2.6**	**3**	**2.6**	**2.8**	**2.8**	**2.6**		**2.6**	**2.8**	**2.6**	**2.8**	**3**	**2.6**	**2.8**	**2.6**	
PO Mean									**2.7**	PSO Mean								**2.7**
Strength of PO Correlation				Strong						Strength of PSO Correlation				Strong				

Semester – IV			
Part III Core VI	**Modern Algebra**		
Course Code: 21UMAC41	**Hrs/week: 6**	**Hrs/Semester: 90**	**Credits: 5**

Course Outcome:

Co. No	Upon completion of this course, students will	PSOs addressed	CL
CO-1	describe and generate the basic algebraic structures such as Groups, Rings, Fields, Integral Domain, Euclidean Domain, etc., and will identify examples of these specific constructs.	1	Ev
CO-2	have a working knowledge of important mathematical concepts such as order of Group, order of an element, generator of a cyclic group, index of a subgroup, characteristic of a Ring, Maximal and Prime Ideals etc.,	2	Un
CO-3	analyze relationship between abstract algebraic structures with familiar number system such as integers, complex and real numbers	2	An
CO-4	critically analyze and construct mathematical arguments that relate to the study of introductory linear algebra. (Proof and Reasoning).	4	An
CO-5	produce the group concepts in other science disciplinary	3	Ap
CO-6	illustrate the isomorphic structures	4	An

Modern Algebra -21UMAC41

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	3	2	2	**2.8**
CO-2	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-3	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-4	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-5	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-6	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
Average	**3**	**3**	**3**	**3**	**3**	**2.8**	**2**	**2**		**3**	**3**	**3**	**3**	**3**	**3**	**2**	**2**	
PO Mean									**2.7**	PSO Mean								**2.8**
Strength of PO Correlation					Strong					Strength of PSO Correlation				Strong				

Semester – IV			
Part III	**Allied Statistics II**		
Course Code: 21UMMA41	**Hrs/week: 6**	**Hrs/Sem: 90**	**Credits: 4**

Course Outcome:

CO.No.	Upon completion of this course, students will be able to	PSOs addressed	CL
CO-1	understand the difference between the weighted index numbers and unweighted	1 and 2	Un
CO-2	compute the upper and lower control limits for different chart	3	Ev
CO-3	apply concepts and theorems in solving problems.	4	Ap
CO-4	demonstrate problem solving skills	3	An
CO-5	know type I and type II error	1	Cr
CO-6	classify the different test static and apply the correct test static	4 and 5	Un &Ap

21UMMA41 -statistics II

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	2	3	3	3	2	**2.8**	3	3	3	3	3	2	2	2	**2.6**
CO-2	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	2	**2.6**
CO-3	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	1	**2.5**
CO-4	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	3	**2.8**
CO-5	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	3	**2.8**
CO-6	3	3	3	3	3	3	3	3	**3.0**	3	3	3	3	3	3	3	3	**3.0**
Average	**3**	**3**	**3**	**3**	**3**	**2.2**	**2**	**2**		**3**	**3**	**3**	**3**	**3**	**2.2**	**2.2**	**2.3**	
PO Mean									**2.7**	PSO Mean								**2.7**
Strength of PO Correlation				Strong						Strength of PSO Correlation					Strong			

Semester - V			
Part III Core VII (Common Core) Computer Oriented Numerical Methods			
Course Code: 21UCMC51	**Hrs/Week: 6**	**Hrs/ Semester: 90**	**Credits: 5**

Course Outcome:

CO. No.	Upon completion of this course, students will be able to	PSOs addressed	CL
CO-1	find numerical solution of a problem in all aspects and apply these methods to practical implementation as reliable and efficient.	3	Re
CO-2	recognize and apply appropriate principles and concept relevant to numerical analysis.	5	Ap
CO-3	discover the most appropriate estimate for the missing data.	1	Cr
CO-4	analyze the errors obtained in the numerical solutions of problems.	6	An
CO-5	use appropriate numerical methods, determine the solutions to given problems.	3	Ap
CO-6	demonstrate the use of the interpolation method to find the solution for the data.	4	Un

21UCMC51 Computer Oriented Numerical Methods

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	3	3	3	2	**2.9**	3	3	3	3	3	2	2	2	**2.6**
CO-2	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	1	**2.5**
CO-3	3	3	3	3	3	2	2	1	**2.5**	3	3	3	3	3	2	2	2	**2.6**
CO-4	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	3	**2.8**
CO-5	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	3	**2.8**
CO-6	3	3	3	3	3	2	3	3	**2.9**	3	3	3	3	3	3	3	3	**3.0**
Average	**3**	**3**	**3**	**3**	**3**	**2.2**	**2**	**2**		**3**	**3**	**3**	**3**	**3**	**2.2**	**2.2**	**2.3**	
PO Mean									**2.7**	PSO Mean								**2.7**
Strength of PO Correlation				Strong						Strength of PSO Correlation					Strong			

Semester - V			
Part III Core VIII	**Linear Algebra**		
Course Code: 21UMAC51	**Hrs/week : 5**	**Hrs/Semester : 75**	**Credits : 4**

Course Outcome:

CO.No.	Upon completion of this course, students will be able to	PSOs addressed	CL
CO-1	analyze and construct mathematical arguments that relate to the study of linear algebra. (proof and reasoning).	3	An
CO-2	work within vector spaces and to distill vector space properties	3	An
CO-3	solve systems of linear equations and determine whether a system of equations is consistent or not and find its general solution.	6	An
CO-4	compute eigenvalues and eigenvectors of a matrix.	4	Ap
CO-5	develop analytical thinking in R-Programming	5	An
CO-6	understand the concept of Inner Product Spaces	1	Un

21UMAC51- Linear Algebra

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	3	2	**2.9**
CO-2	3	3	3	2	2	2	2	2	**2.4**	3	3	3	3	3	3	3	2	**2.9**
CO-3	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	3	2	**2.9**
CO-4	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	3	2	**2.9**
CO-5	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	3	3	**3**
CO-6	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
Average	**3**	**3**	**3**	**2.8**	**2.8**	**2.8**	**2**	**2**		**3**	**3**	**3**	**3**	**3**	**3**	**2.9**	**2.2**	
PO Mean									**2.7**	PSO Mean								**2.9**
Strength of PO Correlation				Strong						Strength of PSO Correlation				Strong				

Semester V			
Part III Core IX	**Graph Theory**		
Course Code : 21UMAC52	**Hrs / Week : 5**	**Hrs / Semester: 75**	**Credits: 4**

Course Outcome:

CO. No.	Upon completion of this course, students will be able to	PSO s addressed	CL
CO-1	identify induced subgraphs, paths,cycles ,independent sets and coverings in graphs	1	Re
CO-2	determine whether graphs are Hamiltonian and/or Eulerian and to solve problems involving vertex and edge connectivity, planarity and crossing numbers	5	An
CO-3	combine theoretical knowledge and independent mathematical thinking in creative investigation of questions in graph theory.	8	Un
CO-4	inspect the applications of graph theory	7	An
CO-5	model and solve real-world problems using graphs both quantitatively and qualitatively.	4	Ap
CO-6	develop an appropriate level of mathematical literacy and competency and formulate problems in terms of graphs, solve graph theoretic problems and apply algorithms.	6	Cr

Graph Theory-21UMAC52

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	3	3	2	**2.9**
CO-2	3	3	3	3	3	2	3	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-3	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	2	2	2	**2.6**
CO-4	3	3	3	3	3	2	1	2	**2.5**	3	3	3	3	3	2	2	2	**2.6**
CO-5	3	3	3	3	3	2	3	2	**2.8**	3	3	3	3	3	3	1	2	**2.6**
CO-6	3	3	3	3	3	2	3	2	**2.8**	3	3	3	3	3	3	3	2	**2.9**
Average	**3**	**3**	**3**	**3**	**3**	**2.2**	**2.3**	**2**		**3**	**3**	**3**	**3**	**3**	**2.7**	**2.2**	**2**	
PO Mean									**2.7**	PSO Mean								**2.7**
Strength of PO Correlation				Strong						Strength of PSO Correlation					Strong			

SEMESTER – V			
Part III Core X Real Analysis			
Course Code :21UMAC53	**Hrs / Week: 4**	**Hrs / Semester: 60**	**Credits: 4**

Course Outcomes:

Co No	Upon completion of this course, students will be able to	PSO s addressed	CL
CO-1	interpret real number system, define and recognize the continuity of real functions	1	Re
CO -2	define and recognize the real functions and its limits	1	Re
CO -3	develop a broad understanding encompassing logical reasoning, generalization, abstraction, and formal proof.	5	An
CO -4	determine the continuity, differentiability of functions defined on subsets of the real line	3	Ev
CO -5	apply the Mean Value Theorem and the intermediate value property to problems in the context of real analysis	5	Ap
CO -6	describe fundamental properties of the real numbers that lead to the formal development of real analysis.	3	An

Real analysis – 21UMAC53

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	3	2	**2.9**
CO-2	3	3	3	3	3	2	3	2	**2.8**	3	3	3	3	3	2	2	2	**2.6**
CO-3	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	2	3	2	**2.8**
CO-4	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	2	**2.6**
CO-5	3	3	3	3	3	2	3	2	**2.8**	3	3	3	3	3	3	2	3	**2.8**
CO-6	3	3	3	3	3	2	3	2	**2.8**	3	3	3	3	3	3	3	2	**2.9**
Average	**3**	**3**	**3**	**3**	**3**	**2.3**	**2.3**	**2**		**3**	**3**	**3**	**3**	**3**	**2.5**	**2.3**	**2.2**	
PO Mean									**2.8**	PSO Mean								**2.8**
Strength of PO Correlation				Strong						Strength of PSO Correlation					Strong			

Semester –V			
Part III Core XI	**Vector Calculus and Fourier Series**		
Course Code :21UMAC54	**Hrs/week :4**	**Hrs/Semester :60**	**Credits :4**

Course Outcome:

CO. No.	Upon completion of this course, students will be able to	PSO s addressed	CL
CO-1	differentiate and integrate vector-valued functions and apply calculus to motion problems in two and three dimensional space	2	An
CO-2	compute gradient, curl and divergence of vector fields.	1 and 3	Cr
CO-3	use the gradient to find directional derivatives.	3	Ap
CO-4	solve problems in multiple integration using rectangular, cylindrical, and spherical coordinate systems	8	Ap
CO-5	select and apply appropriate models and techniques to define and evaluate integrals	3	Ev
CO-6	know that any periodic function can be expressed as a fourier series.	6	Cr

21UMAC54 Vector Calculus and Fourier Series

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	2	3	3	3	3	3	2	2	**2.6**	3	2	3	3	3	3	3	2	**2.8**
CO-2	2	3	3	2	3	3	2	2	**2.6**	3	3	3	3	3	3	2	2	**2.8**
CO-3	3	3	3	2	3	3	2	2	**2.6**	3	3	2	3	3	3	3	2	**2.8**
CO-4	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	3	2	**2.9**
CO-5	3	3	3	2	2	3	2	2	**2.5**	3	3	3	3	3	3	3	2	**2.9**
CO-6	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
Average	**2.7**	**3**	**3**	**2.5**	**2.8**	**2.8**	**2.1**	**2**		**3**	**2.8**	**2.8**	**3**	**3**	**3**	**2.6**	**2.6**	
PO Mean									**2.7**	PSO Mean								**2.8**
Strength of PO Correlation					Strong					Strength of PSO Correlation				Strong				

Semester –V			
Part III Core Elective	**Discrete Mathematics**		
Course Code : 21UMAE51	**Hrs/week : 4**	**Hrs/ Semester: 60**	**Credits : 4**

Course Outcomes

CO No.	Upon completion of this course, students will be able to	PSOs addressed	CL
CO-1	understand logic and mathematical reasoning to count or enumerate objects in a systematic way.	1	Un
CO-2	use truth tables for expressions involving the logical connectives.	8	Ap
CO -3	apply standard rules of inference and grasp the notions of lattices.	3	Ap
CO -4	understand Boolean algebra and truth tables.	1	Un
CO -5	evaluate and simplify expressions using the properties of Boolean Algebra.	5	Ev
CO -6	apply logical reasoning to solve a variety of problems.	4	Ap

Discrete Mathematics-21UMAE51

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	3	2	**2.9**
CO-2	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	3	2	**2.9**
CO-3	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	3	2	**2.9**
CO-4	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	3	2	**2.9**
CO-5	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	3	2	**2.9**
CO-6	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	3	2	**2.9**
Avera ge	**3**	**3**	**3**	**3**	**3**	**3**	**2**	**2**		**3**	**3**	**3**	**3**	**3**	**3**	**3**	**2**	
PO Mean									**2.8**	PSO Mean								**2.9**
Strength of PO Correlation					Strong					Strength of PSO Correlation				Strong				

Semester V			
Part III Core Elective	**Transforms**		
Course Code: 21UMAE52	**Hrs/Week: 4**	**Hrs/Sem: 60**	**Credits: 4**

Course Outcome:

CO. No.	Upon completion of this course, students will be able to	PSO addressed	CL
CO-1	understand the relation between Fourier and Laplace transforms.	4	Ap
CO-2	evaluate complex integrals by various methods.	1	An
CO-3	understand Z - Transforms	1	Un
CO-4	solve ordinary differential equations using Laplace transform.	1,4	An
CO-5	understand the applications of Laplace transform and Fourier Transform	1,5	Un
CO-6	apply the Transforms to various differential equations.	2	Ap

Transforms- 21UMAE52

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-2	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-3	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-4	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-5	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-6	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
Avera ge	**3**	**3**	**3**	**3**	**3**	**3**	**2**	**2**		**3**	**3**	**3**	**3**	**3**	**3**	**2**	**2**	
PO Mean									**2.8**	PSO Mean								**2.8**
Strength of PO Correlation					Strong					Strength of PSO Correlation					Strong			

Semester –VI			
Part III Core XII	**Complex Analysis**		
CourseCode :21UMAC61	**Hrs/week :6**	**Hrs/Semester :90**	**Credits :5**

Course Outcome:

CO No	Upon successful completion of this course students will be able to:	PSO s addressed	CL
CO-1	compute sums, products, quotients, conjugate, modulus, and argument of complex numbers.	1	An
CO-2	understand the significance of differentiability for complex functions and be familiar with the Cauchy-Riemann equations.	2	Un
CO-3	evaluate integrals along a path in the complex plane and understand the statement of Cauchy's Theorem.	6	Ev
CO-4	know the condition(s) for a complex variable function to be analytic and/or harmonic.	3	Un
CO-5	compute the Taylor and Laurent expansions of simple functions, determining the nature of the singularities and calculating residues.	2	An
CO-6	demonstrate curve properties for image processing with transformation	6	Ap

21UMAC61-Complex Analysis

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-2	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-3	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-4	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-5	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-6	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
Avera ge	**3**	**3**	**3**	**3**	**3**	**3**	**2**	**2**		**3**	**3**	**3**	**3**	**3**	**3**	**2**	**2**	
PO Mean									**2.8**	PSO Mean								**2.8**
Strength of PO Correlation				Strong						Strength of PSO Correlation				Strong				

Semester – VI			
Part III Core XIII	**Modern Analysis**		
CourseCode : 21UMAC62	**Hrs / Week: 6**	**Hrs / Semester: 90**	**Credits: 5**

Course Outcome:

CO. No.	Upon completion of this course, students will be able to	PSO s addressed	CL
CO-1	gain knowledge of concepts of modern analysis, such as open sets, closed sets, completeness, connectedness and compactness in metric spaces	1	Un
CO-2	write simple proofs on their own and study rigorous proofs	5	Ap
CO-3	develop a higher level of mathematical maturity combined with the ability to think analytically	2	Un
CO-4	develop a broad understanding encompassing logical reasoning, generalization, abstraction, and formal proof.	5	Ap
CO-5	explain the basic theory of metric spaces and its application to function spaces.	3	Ev
CO-6	apply the theory to solve mathematical problems including the construction of simple proofs.	2	An

Modern Analysis-21UMAC62

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	3	**2.9**
CO-2	3	3	3	3	3	2	2	1	**2.5**	3	3	3	3	3	2	2	2	**2.6**
CO-3	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	2	3	2	**2.8**
CO-4	3	3	3	3	3	2	3	2	**2.8**	3	3	3	3	3	2	2	2	**2.6**
CO-5	3	3	3	3	3	3	1	3	**2.8**	3	3	3	3	3	3	2	1	**2.6**
CO-6	3	3	3	3	3	2	3	2	**2.8**	3	3	3	3	3	3	3	2	**2.9**
Average	**3**	**3**	**3**	**3**	**3**	**2.5**	**2.2**	**2**		**3**	**3**	**3**	**3**	**3**	**2.5**	**2.3**	**2**	
PO Mean									**2.8**	PSO Mean								**2.7**
Strength of PO Correlation				Strong						Strength of PSO Correlation					Strong			

Semester VI			
Part III Core XIV	**Mechanics**		
Course Code :21UMAC63	**Hrs/week :6**	**Hrs/Semester :90**	**Credits :5**

Course Outcomes:

CO.No.	Upon completion of this course, students will be able to	PSOs addressed	CL
CO-1	understand the equilibrium of forces	1	Un
CO-2	distinguish between parallel and nonparallel forces	4	Cr &Ap
CO-3	know the types of friction laws	1	Cr
CO-4	apply friction laws in problems	5	Un &Ap
CO-5	understand the two types of impact and simple harmonic motion	1	Ap
CO-6	determine the simple harmonic motion	4	Ap

21UMAC63-Mechanics

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-2	3	3	3	2	3	3	2	2	**2.6**	3	3	3	3	3	2	2	2	**2.6**
CO-3	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	2	**2.6**
CO-4	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	3	**2.8**
CO-5	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	3	**2.8**
CO-6	3	3	3	3	2	2	3	2	**2.6**	3	3	3	3	3	3	2	2	**2.8**
Average	**3**	**3**	**3**	**2.8**	**2.8**	**2.3**	**2.2**	**2**		**3**	**3**	**3**	**3**	**3**	**2.3**	**2**	**2.3**	
PO Mean									**2.6**	PSO Mean								**2.7**
Strength of PO Correlation				Strong						Strength of PSO Correlation				Strong				

Semester –VI			
Part III Core XV	**Operations Research**		
CourseCode :21UMAC64	**Hrs/week : 6**	**Hrs/Semester :90**	**Credits : 5**

Course Outcome:

CO. No.	Upon completion of this course, students will be able to	PSO s addressed	CL
CO-1	develop a fundamental understanding of linear programming models	1,3	Un
CO-2	solve dual linear programming problem and two-dimensional linear programming problem.	8	Ap
CO-3	apply the simplex method for solving linear programming problem	5	Ap
CO-4	interpret the mathematical tools that are needed to solve optimization problems and comprehend the concept of a Transportation Model and develop the initial solution for the same	4	Un
CO-5	apply the Hungarian method for solving assignment problems	5	Ap
CO-6	examine the significant impact of job sequencing system on total elapsed time management	8	An

21UMAC64-Operations Research

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	3	3	3	2	**2.9**	3	3	3	3	3	3	2	2	**2.8**
CO-2	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	2	**2.6**
CO-3	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	2	**2.6**
CO-4	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	3	**2.8**
CO-5	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	3	**2.8**
CO-6	3	3	3	3	3	2	3	2	**2.8**	3	3	3	3	3	3	3	3	**3.0**
Average	**3**	**3**	**3**	**3**	**3**	**2.2**	**2.2**	**2**		**3**	**3**	**3**	**3**	**3**	**2.2**	**2.2**	**2.2**	
PO Mean									**2.7**	PSO Mean								**2.8**
Strength of PO Correlation				Strong						Strength of PSO Correlation					Strong			

Semester VI			
Part IV Core XVI	**Coding theory**		
Course Code: 21UMAC65	**Hrs / Week: 6**	**Hrs / Semester: 90**	**Credits: 4**

Course Outcome:

CO. No.	Upon completion of this course, students will be able to	PSOs addressed	CL
CO-1	understand the fundamental concepts of coding theory, types of error and control code technique.	1	Un
CO-2	perform with vectors, matrices and projective spaces over finite fields and polynomials.	4	Cr
CO-3	analyze the theoretical principles of source coding.	6	An
CO-4	analyze the notion of various decoding techniques.	3	An
CO-5	prove general facts about different codes and block control coding.	6	Ev
CO-6	apply the knowledge of perfect codes, hamming codes, extended codes and golay codes for error detection and correction.	5	Ap

Coding theory – 21UMAC65

	PO									PSO								
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**Avg**	**PSO-1**	**PSO-2**	**PSO-3**	**PSO-4**	**PSO-5**	**PSO-6**	**PSO-7**	**PSO-8**	**Avg**
CO-1	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
CO-2	3	3	3	2	3	3	2	2	**2.8**	3	3	3	3	3	2	2	2	**2.6**
CO-3	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	2	2	2	**2.6**
CO-4	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	2	2	3	**2.8**
CO-5	3	3	3	3	3	2	2	2	**2.6**	3	3	3	3	3	2	2	3	**2.8**
CO-6	3	3	3	3	3	3	2	2	**2.8**	3	3	3	3	3	3	2	2	**2.8**
Avera ge	**3**	**3**	**3**	**2.8**	**3**	**2.8**	**2**	**2**		**3**	**3**	**3**	**3**	**3**	**2.3**	**2**	**2.3**	
PO Mean									**2.8**	PSO Mean								**2.7**
Strength of PO Correlation					Strong					Strength of PSO Correlation					Strong			

Attainment of Course Outcomes of the BSc Mathematics Programme

Course Code	Name of the Course	Course Outcomes															
		Programme Outcomes (PO)								Programme Specific Outcomes (PSO)							
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	PSO-6	PSO-7	PSO-8
21ULTA11	Part-I Tamil	2.8	2.5	2.6	3	2.8	2.5	2.3	3	2.6	2.8	2.8	2.8	2.8	3	2.8	2.6
21ULFA11	Part-I French	3	3	2.8	3	3	3	2.3	3	2.6	3	2.8	2.8	2.8	3	3	3
21UGEN11	Part-II General English	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.5	2.5	2.5	2.5	2.5	2.6	2.5	2.6	2.5
21UMAC11	Classical Algebra	3	3	3	2.8	3	2.2	2	2	3	3	3	3	3	2.5	2.5	2
21UMAC12	Calculus	3	3	3	3	3	2.8	2	2	3	3	3	3	3	2.3	3	2
21ULTA21	Part-I Tamil	2.8	2.6	2.6	3	2.8	2.5	2.5	2.8	2.6	2.8	2.6	2.8	2.8	2.6	2.8	2.6
21ULFA21	Part-I French	2.8	3	3	3	3	3	2.3	3	3	3	3	2.8	3	3	2.8	3
21UGEN21	Part-II General English	2.6	2.5	2.6	2.5	2.6	2.5	2.5	2.5	2.6	2.5	2.6	2.5	2.6	2.5	2.6	2.5
21UMAC21	Analytical Geometry of Three Dimension	3	3	3	3	3	2.8	2	2	3	3	3	3	3	2.3	2	2.3
21UMAC22	Differential Equatio	3	3	3	3	3	2.8	2	2	3	3	3	3	3	2.3	2	2
21ULTA31	Part-I Tamil	2.6	2.8	2.6	3	2.8	2.5	2.5	2.8	2.5	2.8	2.6	2.8	2.8	2.6	2.8	2.6
21ULFA31	Part-I French	2.8	3	2.8	3	3	3	2.7	3	2.7	3	3	2.8	3	3	2.8	3
21UGEN31	Part-II General English	2.8	2.6	2.5	3	2.5	2.8	2.6	2.5	2.5	2.8	2.6	2.8	2.8	2.3	2.8	2.5
21UMAC31	Sequences and Serie Trigonometry	3	3	3	3	3	2.3	2.3	2	3	3	3	3	3	2.5	2.3	2
21UMMA31	Statistics I	3	3	3	3	3	2.2	2	2	3	3	3	3	3	2.2	2.2	2.2
21ULTA41	Part-I Tamil	2.6	2.5	2.6	2.6	2.8	2.5	2.8	2.8	2.6	2.8	2.8	2.5	2.8	2.6	2.8	2.6
21ULFA41	Part-I French	3	2.8	3	3	3	3	2.3	3	2.8	2.8	3	3	3	3	3	3

21UGEN41	Part-II General English	2.8	3	2.6	3	2.6	2.8	2.8	2.6	2.6	2.8	2.6	2.8	3	2.6	2.8	2.6
21UMAC41	Modern Algebra	3	3	3	3	3	2.8	3	3	3	3	3	3	3	3	2	2
21UMMA41	Statistics II	3	3	3	3	3	2.2	2	2	3	3	3	3	3	2.2	2.2	2.3
21UCMC51	Computer Oriented Numerical Methods	3	3.	3	3	3	2.2	2	2	3	3	3	3	3	2.2	2.2	2.3
21UMAC51	Linear Algebra	3	3	3	2.8	2.8	2.8	2	2	3	3	3	3	3	3	2.9	2.2
21UMAC52	Graph Theory	3	3	3	3	3	2.2	2.3	2	3	3	3	3	3	2.7	2.2	2
21UMAC53	Real Analysis	3	3	3	3	3	2.3	2.3	2	3	3	3	3	3	2.5	2.3	2.2
21UMAC54	Vector Calculus and Fourier Series	2.7	3	3	2.5	2.8	2.8	2.1	2	3	2.8	2.8	3	3	3	2.6	2.6
21UMAE51	Discrete Mathematics	3	3	3	3	3	3	2	2	3	3	3	3	3	3	3	2
21UMAE52	Transforms	3	3	3	3	3	3	2	2	3	3	3	3	3	3	2	2
21UMAC61	Complex Analysis	3	3	3	3	3	3	2	2	3	3	3	3	3	3	2	2
21UMAC62	Modern Analysis	3	3	3	3	3	2.5	2.2	2	3	3	3	3	3	2.5	2.3	2
21UMAC63	Mechanics	3	3	3	2.8	2.8	2.3	2.2	2	3	3	3	3	3	2.3	2	2.3
21UMAC64	Operations Research	3	3	3	3	3	2.2	2.2	2	3	3	3	3	3	2.2	2.2	2.2
21UMAC65	Coding Theory	3	3	3	2.8	3	2.8	2	2	3	3	3	3	3	2.3	2	2.3
Average Correlation		**3**	**3**	**2.9**	**2.9**	**2.9**	**2.6**	**2.3**	**2.3**	**2.9**	**2.9**	**2.9**	**2.9**	**2.9**	**2.6**	**2.5**	**2.4**
Mean Overall Score		**2.7**	**The POs and PSOs are strongly correlated with the COs of the programme**														